

# EUROPEAN PATENT OF CE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 59157420  
PUBLICATION DATE : 06-09-84

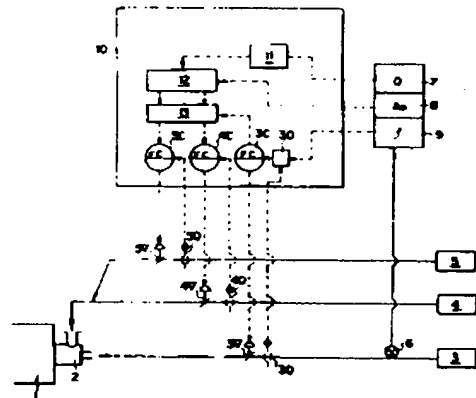
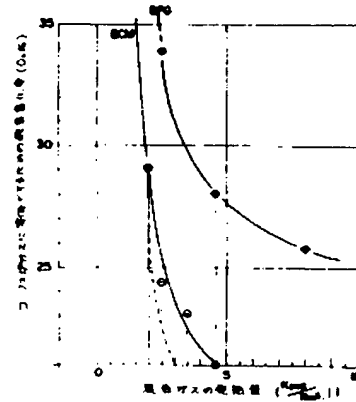
APPLICATION DATE : 22-02-83  
APPLICATION NUMBER : 58028184

APPLICANT : SUMITOMO METAL IND LTD;

INVENTOR : SHIMAMURA KOICHI;

INT.CL. : F23N 5/00 F23N 1/02

TITLE : COMBUSTION CONTROLLING  
METHOD UTILIZING MIXED GAS FUEL



ABSTRACT : PURPOSE: To prevent the thermal data of a thermal installation from fluctuation, also contrive the energy-saving and low cost by a method wherein a pure oxygen is introduced into a combustion air line under the control of supplying quantity thereof according to the fluctuation of calorific value produced from mixed gas.

CONSTITUTION: A first calculator 11 calculates the optimum oxygen density for an objective heating furnace 1 with collating to the relation shown in previously known figure based on the actual calorific value of a mixed gas fuel 3 from a calorimeter 7. Subsequently, the second calculator 12 calculates required amount of air and pure oxygen based on the optimum oxygen density from the first calculator 11, and theoretical amount of air from  $A_0$  meter 8, then outputs those data to a comparative calculator 13. The comparative calculator 13 decides the ratio of said data, then the optimum oxygen density condition can be regulated by controlling for each amount of pure oxygen and combustion air. The controlling of said oxygen and air is actually performed with flow regulators 5C, 4C, hereupon, the density value from a density meter 9 is compensated in a density compensating circuit 3D.

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